Aerial Lift and Chipper Safety



Presented by:

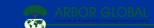
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ISA Board Certified Master Arborist WE-1785 BU



Aerial Lifts

Aerial lifts permit workers to safely and efficiently access elevated portions of trees to conduct required work





Aerial Lifts

Permit unqualified individuals to easily enter potentially dangerous sites high in trees

- Significantly increases risk to worker and public
- Results in injuries and sometimes fatalities
- Damages trees





Aerial Lift Accidents

Most common:

- Overturns
- Falls from platform
- Boom collapse
- Crushing
- Electrocution



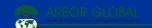




Aerial Lift Accidents

Fatality Statistics:

Cause	Boom- supported lifts	Scissor lifts	Unknown type of lift	Total
Electrocutions	62	6	-	69
Falls	35	23	6	64
Collapses or tipovers	23	21	-	46
Caught in/between	11	-	•	14
Struck by/against	6	-		9
Other causes	5	-	•	5
Total deaths	142	55	10	207



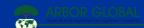
Aerial Lift Safety

Always follow safety requirements:

- Applicable laws and regulations
- ANSI standards
- Manufacturer's operating instructions







Aerial Lift Safety

Adequate training, maintenance and operation is critical to avoid serious injury, death and property damage:

- Qualified Operator
- Properly use required personal protective equipment
- Conduct correct inspection and maintenance practices
- Follow safe lift transport and set-up
- Practice correct, safe operating procedures

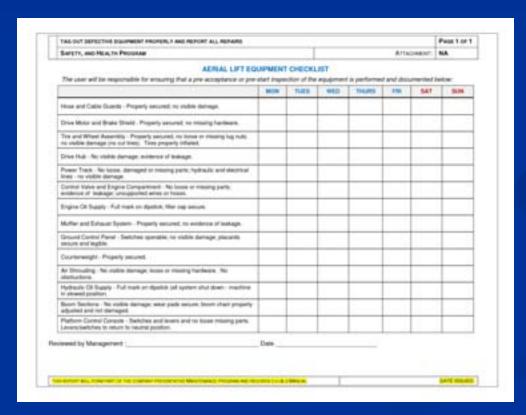




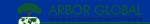


Aerial Lift Safety

Checklist based on the manufacturer's operator's manual is excellent guide to direct and record each inspection, maintenance and set-up operation.



AERIAL LIFT DEVICE Preventive Maintenance Checklist Note: The items below should be impacted during a typical preventive maintenance check. Additional checkfor items may be expained depending on equipment or circumstances. UNDERSTOOD Motor oil, power stooing DITERIOR Codast level, hoses Feel line leader Belt tensions Histor & salety devices Fed level Wiper Hades & control Windshield Waster Motors, paspor-& control EXTERIOR Scan & was belo-Sear Subsy Hoad, tail, direction lights Cals body, place Warning Spher-CENERAL Reflectors Educat cystem Coupling devices Historike Sees Engley Backerblation Fire entirentials Solids bold (September) Emergency Wangle Fire of the Sec. Tiers, wheels, her belie-Website recreate Springs - stooring mechanism Dates like, universal inter-Deale of severedes



Qualification requires training, knowledge, experience and demonstrated proficiency:

Read and understand operator's manual





Understand laws and regulations that affect the equipment and job

American National Standard

ANN 2113 1-2004

for Arboricultural Operations— Safety Requirements



OSHA Fact Sheet

Using Aerial Lifts

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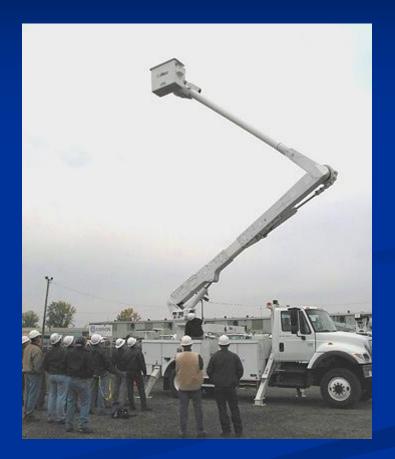
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Adequate, hands-on training

- Inspection
- Transport
- Set-up
- Operation





Demonstrate proficiency

- Lift operation
- Conduct of work from bucket





Personal Protective Equipment

Select, inspect and properly use all required PPE

- Hard hat
- Body belt/harness
- Lanyard attached to boom or basket
- Eye protection
- Hearing protection?





"Field Modification"

- Modifications in structure, attachments or use not permitted Unless
- Certified in writing by the manufacturer or nationally recognized testing laboratory, to be in conformity with ANSI A92.2-1969 and as safe as before modification





Inspect key operating parts of carrier and lift

- Prior to use each day
- Anytime incident occurs that may damage lift or carrier
- General condition to ensure clean, dry & no significant defects or damage





Insulated Booms for insulator condition (upper and lower)

- Clean and dry
- Damage or defects







Hydraulic system – fluid levels, leaks





Lift cradle – cracks, damage, lift secure







Outriggers - welds and structure cracks, damage







Warning decals in place and readable









Pylon Mast (pedestal)

- Bolts secure with no defects or damage
- Welds no cracks or other structural defects







Pivot Pins

- Seated properly
- Bushings wear or damage





Drive cables or chains (if present)

- Lubrication adequate
- Signs of cable fatigue or strands broken
- Break tolerances adequate in a single lay of cable







Guard and covers

• In place and in good condition



- Hoses:
 - Damage/defects
 - Leaks, cracks, breaks
- Hose connections
 - Secure
 - Cracks, leaks





- Drive Cylinders
 - Cylinder Caps damage, leaking fluid
 - Rod Ends cracks, excessive wear, damage







Controls

- Labels present and legible
- Test fly all functions -
 - Travel directions smooth and correct
 - Lower control station first, then platform







Bucket/platform

- Welds (cracks)
- Excessive wear
- Damage
- Missing parts
- Proper gate operation
- Lift bolts and cotter pins secure
- Rotation points cracks, damage







Tires

- Pressure
- Damage
- Lug nuts tight





Brake operation











Safety Devices:

- Lights
- Back-up alarms
- Interlock devices
- Other safety devices







Ensure carrier and lift secure and safe to move





- Ensure that the boom is fully retracted/folded
- Cradle and secure boom according to manufacturer







Stow and secure detachable and portable equipment and attachments





Know the minimum overhead ground clearance

- Avoid overhead obstructions
 - Low utility lines
 - Bridges
 - Tree branches





Conduct vehicle inspection to conform to DOT requirements

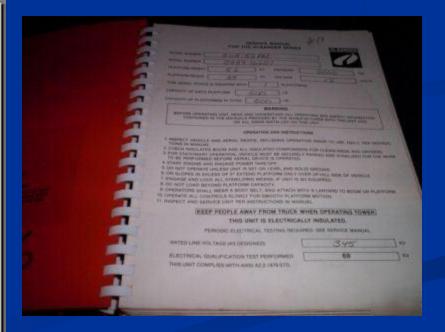




Ensure all documents current and stored on truck:

- Current truck inspection
- Lift manual
- Reports for annual inspections required by manufacturer

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- Working fire extinguisher stored in appropriate location
- Fully stocked first aid kit, appropriate for the work stored in appropriate location







Conduct final walk-around inspection

• Ensure all attachments, equipment and lift boom properly secured.

